



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/620,068	07/15/2003	Kai H. Chang	Chang 6-17-28	7129

7590 12/08/2006
Fitel USA Corp.
Room 2H02
2000 Northeast Expressway
Norcross, GA 30071

EXAMINER

HOFFMANN, JOHN M

ART UNIT PAPER NUMBER

1731

DATE MAILED: 12/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/620,068

Applicant(s)

CHANG ET AL.

Examiner

John Hoffmann

Art Unit

1731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 October 2006.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-8 and 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "Si defects" is indefinite as to its meaning. First of all, examiner could find no definition of this term. Second, from [0042] applicant discloses that the treatment does not reduce the number of defects, rather it seems to convert them to less harmful defects. Also, [0012] indicates that there are other Si defects beyond "Si-O • defects" and "Si • defects" – but there is no indication as to what those other defects might be. For example it is unclear whether SiD is an Si defect – which would mean it is unclear whether practicing applicant's invention to merely convert Si defects into SiD defects would infringe on the claims because it does not reduce "the amount" rather it merely changes the form of the defects.

The term "room temperature" is indefinite as to its meaning. As per the everything2.com website reference (see PTO-892), "room temperature" can be from -10 C to 50 C. Physicists go by the narrow range of 21-23 C. One of ordinary skill would not be able to ascertain what temperatures read on the claims and which would

Art Unit: 1731

not. Applicants give no indication or examples as to what temperatures do or do not read on "room temperature".

See Allen Eng'g Corp. V. Bartell Indus. Inc. 299 F.3d 1336, 1348, 63 USPQ2d 1769, 1775 (Fed. Cir. 2002) (quoting Personalized Media Communications, LLC v. Int'l Trade Comm'n, 161 F.3d 696, 705, 48 USPQ2d 1880, 1888 (Fed. Cir. 1998)) ("In determining whether the claim is sufficiently definite, we must analyze whether "one skilled in the art would understand the bounds of the claim when read in light of the specification.") See also, Exxon Research & Eng'g Co. v. United States, 265 F.3d 1371, 1375, 60 USPQ2d 1272, 1276 (Fed. Cir. 2001) (citation omitted) (patent claims must be "sufficiently precise to permit a potential competitor to determine whether or not he is infringing").

More importantly, since Lemaire 5478371 teaches 50 C treatment – it is presumed that applicant may dispute whether it reads on "room temperature". This rejection will serve to maintain compact prosecution on this issue – especially in the event of an appeal.

The phrase "to limit any future hydrogen-aging increase" is indefinite as to whether it means that it limits at least one increase – or that it means that there is no manner in which there can be such an increase. See also the prior art rejection.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-8 and 10 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to

Art Unit: 1731

one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

There is no support for the new claim 1 limitation "to limit any future hydrogen-aging increase in transmission loss...." Whereas it is clear that there is support limiting some future increases, there is no support for limiting all possible future increases. The plain reading of the claim is that it requires that it is impossible to increase the loss beyond 0.04 db/km. Just because applicant used the fiber in a particular environment for a particular length of time and got a loss increase that was no more than 0.04 db/km, it does not reasonably follow that the fiber could not have a greater loss with some other environment, for an extreme example, in 300 atm of hydrogen, at 800 C for 40 years.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Atkins 5287427.

See the prior Office action for the manner in which Atkins was applied. As to the new transmission loss at 1385nm – see col. 7, lines 48-68. 1.39 microns is substantially the same as the claimed 1385 nm.

Art Unit: 1731

As to the new limitation that the exposure is such that "any future" increase is less than 0.04 db/km – it is deemed that it is inherent that the future increase that occurs 1 second after the treatment is less 0.04 db/km. Alternatively even if the loss increased by 0.04 db/km within one second, one could find a time period less than one second wherein the increase limit is met. Clearly the loss must be 0.01 prior to it being 0.04.

Claim 2: Atkins 187 atmospheres at 6 days (col. 4, line 27) hydrogen would have about 0.028 atm of naturally occurring deuterium. 0.028 is deemed to be approximately 0.01 atm.

Claim Rejections - 35 USC § 103

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

Art Unit: 1731

the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Atkins 5287427 or Lemaire 5478371.

As to the new limitation that the exposure is such that "any future" increase is less than 0.04 db/km – it is deemed that it is inherent that the future increase that occurs 1 second after the treatment is less 0.04 db/km. Alternatively even if the loss increased by 0.04 db/km within one second, one could find a time period less than one second wherein the increase limit is met. Clearly the loss must be 0.01 prior to it being 0.04.

Furthermore, as to the loss limitations of 0.33 db/km it would have been obvious to have the loss as low as possible – so as let the signal be as strong as possible. Atkins teaches to use standard communications fiber- (col. 3, lines 39-40); as does Lemaire (col. 4, line 60). Clearly, it would have been obvious to make standard fibers with as low of loss as possible.

Art Unit: 1731

As to claims 2 and 10: Claim 2: Atkins 187 atmospheres at 6 days (col. 4, line 27) hydrogen would have about 0.028 atm of naturally occurring deuterium. 0.028 is deemed to be approximately 0.01 atm. Atkins and Lemaire uses times and partial pressures commensurate with those claimed. It would have been obvious to use whatever time and pressures necessary to get the fiber properties desired for the final product.

Response to Arguments

Applicant's arguments filed 10/10/2006 have been fully considered but they are not persuasive.

Applicant points to support for the loss increase of less than 0.04 db/km. Examiner notes that the cited passages indicates that the fiber has a loss increase of less than 0.04, however this is deemed to be insufficient. The claim refers to "any future" increase. There is nothing which suggests the fiber was capable of preventing any future increase greater than 0.04. As an analogy: a passage that says an object is heated to no more than 900 C would not reasonably support a limitation that the object is sufficient to limit any future heating to 900 C.

It is also argued that "paragraphs [0010]" (sic) make it clear that SiD is not a defect because it is no longer free to react with hydrogen. Examiner could find nothing in [0010] which indicates that the test for whether a specie is a defect is whether it is free to react with hydrogen.

The specification must clearly set forth the definition explicitly and with reasonable clarity, deliberateness and precision. *Teleflex Inc. v. Ficosa North America Corp.*, 63

Art Unit: 1731

USPQ2d 1374, 1381 (fed. Cir. 2002), *Rexnord Corp. v. Laitram Corp.* 60 USPQ2d 1851, 1854 (fed. Cir. 2001) and MPEP 2111.01.

Even if [0010] does (somehow) limit the meaning of “defect” in the manner asserted by applicant, it is not done explicitly nor with reasonable clarity, deliberateness and precision.

As to the term “room temperature”, applicant submits evidence that it is 21-23 C. Applicant also submits other evidence that it is 20-25 C. Given that applicant’s evidence indicates there is no standard meaning – it is deemed such is further evidence that the term is indefinite. Moreover applicant does not accept the evidence that applicant provided. Rather, applicant argues that the term means between “approximately 20” and (exactly) 25 C. Given all of the evidence of record, it is deemed that one of ordinary skill would not be able to ascertain what the claim defines.

It is also argued that Atkins teaches away from the present invention because Atkins has a loss that is greater than applicant’s recited loss. Whereas it is true that the final fiber might have a high loss, the claims do not specify the final loss in the fiber. As pointed out above: the prior art methods use a standard fiber. One would have been motivated to have/make the standard fibers so that they have the lowest possible loss. One would want signals to be able to travel as far as possible with as little loss as possible.

The arguments relating to the increase in loss in Lemaire are not convincing because that are largely irrelevant because the claims do not preclude a loss increase

Art Unit: 1731

during the method. Rather the limitation of loss increase refers to "future" increases – i.e. those after the method.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

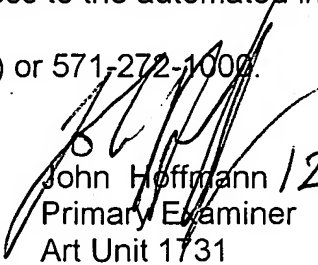
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Hoffmann whose telephone number is (571) 272 1191. The examiner can normally be reached on Monday through Friday, 7:00- 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1731

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


John Hoffmann
Primary Examiner
Art Unit 1731

12-7-06

JMH